



The 2018 U.S. Nuclear Posture Review, NATO's Brussels Summit and Beyond

Jacek Durkalec

Center for Global Security Research
Lawrence Livermore National Laboratory

June 2018

The 2018 U.S. Nuclear Posture Review, NATO's Brussels Summit and Beyond

Jacek Durkalec

Photo on the cover page: The U.S. Navy ballistic missile submarine USS Maryland (SSBN 738) arrives at Her Majesty's Naval Base Clyde, Scotland (Faslane), March 16, 2018. Photo By: LPhot Stevie Burke, Royal Navy.

Table of Contents

Author’s Biography iv

Executive Summary 1

Introduction 3

NATO’s Post-Cold War Nuclear Trajectory 4

Russia as a Nuclear Competitor 8

Nuclear Supplements13

Collective Nuclear Deterrence18

Disarmament and Arms Control21

Nuclear Declaratory Policy26

The Brussels Summit and Beyond29

Notes32

Author's Biography

Jacek Durkalec is a Postdoctoral Research Fellow at the Center for Global Security Research (CGSR) at Lawrence Livermore National Laboratory. His research focuses on US policy of extended nuclear deterrence, including similarities, differences, and interdependencies between U.S. security guarantees in Europe and the Asia-Pacific region. His areas of interest also include NATO deterrence and defense policy, nuclear and conventional arms control, missile defense, and WMD non-proliferation. Prior to joining CGSR, from 2010 to 2017, he was a Research Analyst at the Polish Institute of International Affairs (PISM). He was also a Staff Member in the Missile Defense Office of the Polish Ministry of National Defense in 2009-2010, and an intern in the Strategic Planning Unit of the Executive Office of the Secretary-General of the United Nations in 2008. Jacek holds a doctorate in Political Science (2016) and master's degree in International Relations (2008) from the Jagiellonian University, Krakow, Poland.

He authored book chapters, reports, articles and analyses, including NATO Nuclear Adaptation at the Warsaw Summit (in: NATO and Collective Defense in the 21st Century: An Assessment of the Warsaw Summit, K. Friis, ed., Routledge 2017), and Nuclear-Backed "Little Green Men:" Nuclear Messaging in the Ukraine Crisis (Polish Institute of International Affairs, 2015).

The views expressed in this paper are the responsibility of the author and do not necessarily reflect those of the United States government or Lawrence Livermore National Security.

The author is grateful for commentary on earlier drafts of this paper by Robert Bell, Brad Roberts, and David Yost.

Executive Summary

The NATO allies must react to the nuclear policy and posture choices of the Trump administration. In some respects, there are good reasons why the Alliance should move closer to the Trump Administration. In other cases, Allies should seek agreement on slightly different policies. While it is unrealistic to expect that the NATO allies will be able to resolve all the questions posed by the 2018 Nuclear Posture Review at the Summit in Brussels, there are several things that they should be able to agree upon. This includes more specific language about the Russia nuclear challenges, general recognition of U.S. efforts to bolster NATO nuclear deterrence posture, a clear language on the value of nuclear sharing arrangements, and reaffirmation of some of NATO's statements on arms control and disarmament. Yet, a signal in Brussels of NATO's efforts to build a new nuclear consensus would be stronger if heads of state and government initiated a broader process aimed at developing a comprehensive deterrence and defense strategy that would treat nuclear deterrence as an integral part of a multi-domain approach.

Introduction

The 2018 Nuclear Posture Review (NPR) outlines key nuclear policy and posture choices made by the Trump administration. While the NPR has elements of continuity, the changes it proposes will have an impact on the U.S. contribution to NATO's nuclear deterrence posture. The document raises several questions about NATO's future nuclear trajectory: is NATO on the right path for adapting and strengthening its deterrence policy and posture? How should NATO allies approach a nuclear confrontation with Russia? What kinds of nuclear capabilities are sufficient for deterrence? What should be the future of NATO's collective deterrence? What should be the balance between deterrence and disarmament? How should NATO adapt its policy on nuclear arms control? What kind of nuclear message should NATO send to the outside world? How the NATO allies approach these questions is significant. One of the key priorities of the NPR is to strengthen extended deterrence and assurance, and without Allied support these goals will not be achieved.

Synchronizing the new U.S. policy and NATO policy will not be easy. Some Trump administration decisions revise NATO's post-Cold War nuclear trajectory beyond the adaptation measures taken by NATO in recent years. Yet, a debate on how the NPR affects NATO nuclear policy could be instrumental in helping the Alliance come to terms with a radically changed security landscape. In some respects, there are good reasons why the Alliance should move closer to the Trump administration. In other cases, Allies should seek agreement on slightly different policies and correct some deficiencies of the NPR.

To assess implications of the 2018 NPR for NATO, the paper will outline NATO's nuclear trajectory since the end of the Cold War, the adaptation measures taken in recent years that changed it, and why the NPR conclusions differ from NATO's current nuclear policy. The paper will offer specific recommendations on the best way for the Alliance to go forward on each issue at NATO's 2018 Brussels Summit and beyond.

NATO's post-Cold War nuclear trajectory

NATO's nuclear policy and posture since the end of the Cold War have been dominated by several trends.¹ They continue to influence NATO thinking on nuclear weapons, even though NATO has adjusted its nuclear trajectory since 2014. Changes in U.S. nuclear policies have played an important role in shaping these trends. This is not surprising as U.S. influence is a natural consequence of the role of U.S. nuclear weapons for the Alliance. The U.S. strategic nuclear forces have been the supreme guarantee of the Alliance's security. The strategic nuclear forces of the U.K. and France have only supplemented the U.S. deterrent effect. Likewise, U.S. non-strategic nuclear weapons (NSNW) have been a basis of collective nuclear deterrence. This is because U.S. nuclear weapons based in Europe, and Allied role in their storage and delivery, have historically allowed the sharing of political, operational, and financial burdens. They also enabled signaling of collective resolve that is that an attack on one will be treated as an attack on all. Without U.S. nuclear weapons, there would be no collective nuclear consultations, planning, or exercises.

At the end of the Cold War, NATO did not perceive any clear nuclear challenge from Russia or any other country. Even though Russia continued to possess substantial strategic forces and a large stockpile of non-strategic nuclear weapons after the collapse of the Soviet Union, this was generally not considered a source of concern. NATO's post-Cold War policy toward Russia could be best described as "lead and hedge," a term coined by the Clinton administration. NATO, following the U.S., was "leading" toward further nuclear reductions and increased nuclear safety and security in Europe, and "hedging" against Russia's revanchism.² The Alliance, however, was steadily leaning more toward "leading" than "hedging" in nuclear matters. Returning to a confrontational relationship with Russia was seen as unlikely. Russia's greater emphasis on nuclear weapons in the 2000s did not affect the Alliance's calculations. Following the Obama administration's policy, the 2010 NATO Strategic Concept and

2012 Deterrence and Defense Posture Review (DDPR) were based on an expectation that the relationship with Russia could be built on shared interest in strategic stability, and that the role of nuclear weapons could be further reduced. This trend was partially reversed in 2014 by Russia's aggression against Ukraine, which was accompanied by Russia's implicit and explicit nuclear threats. The U.S. and its NATO allies came to realize that nuclear weapons play a role in Russia's aggressive policy. After initial reluctance, NATO officials became more outspoken about it in early 2015.³ The first common statement by the NATO allies about Russia's new nuclear activities appeared in the 2016 Warsaw Summit Communiqué.⁴

The other prevailing post-Cold War tendency within NATO was a reluctance to talk about nuclear weapons. This was driven in part by a fear that it might lead to a backlash in some anti-nuclear circles in Western societies. Also, politicians within the Alliance became less comfortable and interested in engaging in dialogue about the value of nuclear deterrence and its ethical, political, and military aspects. As a result, NATO's nuclear narrative shifted from deterrence to emphasizing NATO's efforts to pursue further nuclear reductions. The Alliance's language on nuclear deterrence was repeatedly diluted in public documents. While Russia's activities since 2014 forced NATO to put greater emphasis on nuclear deterrence, including a sharpening of declaratory policy at the 2016 Warsaw Summit, the reluctance to talk publicly about nuclear-related issues remained. The public discourse on NATO's adaptation to Russia's challenge focused on conventional weapons, with little space for nuclear arms.

The additional post-Cold War tendency within NATO was toward fewer and less diverse nuclear capabilities. This trend was started by the radical reductions of NSNW undertaken by President George H.W. Bush in the framework of 1991/1992 Presidential Nuclear Initiatives. As a result, the B-61 nuclear gravity bomb, which could be delivered by U.S. or Allied dual-capable aircraft (DCA), became the only U.S. nuclear weapon assigned to the Alliance. The use of strategic weapons remained a matter of independent decision by the United States. Further unilateral reductions made by subsequent U.S. administrations cut the numbers of NSNW by 97%.⁵ The number of countries hosting these weapons were also cut.⁶ President Obama's goal of a nuclear-weapon-free world created hopes in certain NATO countries that U.S. weapons could be removed from their territories.⁷ This caused concerns among the allies which still wanted to preserve a "hedging" role for U.S. weapons. The compromise was found as a part of the 2012 DDPR. All the allies agreed to make further reductions in U.S. nuclear weapons in Europe, contingent upon Russia's reciprocal nuclear reductions. Russia's aggression against Ukraine reinforced the consensus in the Alliance about no further unilateral cuts. Within NATO, however, there was no perceived need to undertake any radical changes in NATO's nuclear posture to tackle Russia's challenge. The prevailing tendency was to maintain that existing sharing arrangements and U.S. strategic nuclear forces would be sufficient for deterrence.

A related preoccupation within NATO in recent decades was a struggle to preserve an effective collective nuclear deterrence posture based on DCA and B-61 bombs. Since the end of the Cold War there had been recurring controversies about the purposes and credibility of the collective nuclear mission. While for some allies, the mission had important deterrence and assurance value, others were not convinced. There were recurring anxieties that the nuclear sharing arrangements might wither away not only because of a possible removal of U.S. nuclear weapons from Europe but also because the Europeans concerned might not invest in replacements for their aging DCA fleet.⁸ Even though the Allies had recommitted themselves to the nuclear sharing arrangements in the 2012 DDPR, the lingering concerns about their future did not disappear. The 2016 Warsaw Summit Communiqué also did not resolve all questions. On the one hand, the Summit Communiqué re-emphasized the need to maintain the broadest possible participation of Allies in the nuclear mission. The NATO allies also dedicated more attention to the operational aspects of nuclear deterrence, including via table-top exercises aimed at preparing decision-makers to make timely decisions during a nuclear crisis.⁹ On the other hand, it remained unclear whether certain European countries would invest in nuclear-capable aircraft that would replace their aging DCA. Also, while the Allies were repeating the need for preserving nuclear burden sharing, they did not explain why it is important for Alliance cohesion to share risks and responsibilities.

Another important trend within NATO was a focus on reducing reliance on nuclear weapons through a greater emphasis on the value of non-nuclear capabilities. Following the Obama administration's approach to regional deterrence architectures, the overall mix of NATO capabilities consisted of nuclear and conventional capabilities, along with missile defense designed for a specific role of territorial defense against potential threats emanating from outside the Euro-Atlantic area – not including Russia. The broadening of NATO's mix was to some degree driven by the expectations of some allies that missile defense could reduce or even substitute for the role of nuclear weapons. Eventually, the notion that nuclear deterrence could be replaced by other capabilities was rejected in the 2012 DDPR. Yet, NATO did not go beyond thinking about how other capabilities could reduce reliance on nuclear weapons. There was no pressure to build coherence among the different elements of the mix. There was no need to create a multi-domain approach to deterrence in which each capability plays a unique role and reinforces the others. Nuclear weapons were stove piped and were politically, institutionally and operationally separated from other elements of the posture. This began to slowly change only after 2014. Following the U.S. lead, NATO started thinking about how to achieve greater coherence between nuclear and conventional capabilities.¹⁰

Since the 1967 Harmel Report, the Alliance has seen nuclear arms control as an important contribution to its security. Since the end of the Cold War, it has enjoyed the benefits of nuclear arms control agreements and reductions made by the United States and Russia. Its approach to nuclear arms control with Russia has been

based on the assumption of a cooperative relationship with Moscow. The NATO allies hoped that greater transparency, more confidence-building measures, and reciprocal reductions of NSNW could be achieved through dialogue and patience. This was reflected in both the 2010 Strategic Concept and the 2012 DDPR. The hopes turned out to be ill-founded, as Russia was not interested in such measures or reductions. The deterioration of NATO-Russia relations following Russia's annexation of Crimea in 2014 made any prospects for meaningful nuclear arms control even more doubtful. This was recognized by the Alliance at the Warsaw Summit. However, the Alliance did not make any effort to reformulate its approach to nuclear arms control. The approach of many European allies to the Intermediate-Range Nuclear Forces (INF) Treaty violation by Russia was based on an assumption that diplomatic efforts would be sufficient to bring Russia back into compliance.

After the end of the Cold War, the NATO allies have remained ambiguous about whether they might use nuclear weapons first in a conflict. However, the general tendency within the Alliance has been to restrict the circumstances in which nuclear weapon use might be contemplated. While the 1994 and 2001 NPRs indicated that U.S. nuclear weapons play a role in deterring use of all types of WMD, the 2010 NPR stated that the U.S. would not use nuclear weapons against non-nuclear-weapon states in compliance with their Non-Proliferation Treaty obligations. The U.S. negative security assurances were followed by the U.K., while France repeated its long-standing negative security assurances to non-nuclear weapon states.

The cumulative result of the above-mentioned trends has been that, in the post-Cold War era, it has become increasingly difficult for the NATO allies to balance nuclear deterrence with disarmament aspirations and expectations about positive trends in the further evolution of the European security landscape. Even though NATO has declared that it will remain a nuclear Alliance as long as nuclear weapons exist, and it will ensure that all components of its nuclear deterrence remain safe, secure, and effective, the Alliance has faced a nuclear identity crisis.

While NATO has begun the process of adaptation of its deterrence and defense posture at the 2014 Wales Summit and continued it with decisions taken at the 2016 Warsaw Summit, the process of NATO's nuclear adaptation has been relatively slow. None of the allies wanted to accelerate or highlight it. Deepening polarization within international community on how to pursue nuclear disarmament caused by the Treaty on the Prohibition of Nuclear Weapons made the Allies even more reluctant to make any significant changes in the nuclear dossier. The NATO allies have continued to operate within the framework of the 2012 DDPR, the latest review of NATO's overall posture made in the light of the 2010 Strategic Concept.¹¹

In the 2018 Nuclear Posture Review, the Trump administration provides its own answer on how to maintain the Alliance's nuclear policy and posture fit for purpose. Some of these answers aim to re-direct NATO's nuclear policy and posture further than has been achieved since 2014.

Russia as a Nuclear Competitor

The central element of the Trump administration's vision of U.S. security policy is the reemergence of long-term Great Power strategic competition. The National Security Strategy (NSS) and the National Defense Strategy (NDS) depict Russia and China as the top rivals. The NPR adds a nuclear dimension to this picture. It repeatedly refers to Russia's strategy and doctrine, which rely on the threat of nuclear escalation or actual employment to terminate a conflict on terms favorable to Russia. According to the NPR, Russia's strategy is backed by a modernized, diverse, and expanding arsenal of up to 2,000 NSNW. The NPR also highlights that there is an "exploitable" U.S. regional deterrence "gap" in a relationship with Russia. It assesses that Russia may have a mistaken confidence that limited nuclear employment with low-yield warheads could be conceivable and advantageous against NATO.¹²

At first glance, the U.S. competitive approach is not different from NATO's policy toward Russia since 2014. NATO adapted its deterrence and defense posture in order to address Moscow's challenges to the status-quo. The NPR, to some degree, also reflects NATO's consensus on Russia's nuclear-related actions as articulated in the 2016 Warsaw Summit Communiqué. The allies raised concerns about Russia's "irresponsible and aggressive nuclear rhetoric, military concept and underlying posture."¹³ They also warned Russia that "any employment of nuclear weapons against NATO would fundamentally alter the nature of a conflict."¹⁴ If there were no concerns about the credibility of NATO nuclear deterrence vis-à-vis Russia, the Alliance would not have sharpened its nuclear rhetoric and taken steps to update its nuclear posture.

Despite similarities, there are stark differences between the Trump administration and NATO policies. In contrast to the United States, some other NATO allies have not decided on how to define their relationship with Russia. Even though Moscow has ceased to be a potential strategic partner, directly calling Russia a strategic competitor has remained a step too far for some Allies. Also, the NATO allies collectively have not

gone so far as to recognize that there is an “exploitable” nuclear deterrence gap in the relationship with Russia. Concerns about Russia’s nuclear strategy have been neither profound nor central to allies’ worries about Moscow’s conduct. The Warsaw Summit Communiqué made this evident. The reference to Russia’s nuclear rhetoric and actions was buried in the middle of a long paragraph and lacked any specific details. The main focus of NATO’s adaptation to Russia’s challenge was on augmenting conventional military capabilities. Confusion about the content and implications of Russia’s nuclear strategy has been exacerbated by assertions that the Trump administration, following the Obama administration, is exaggerating the Russian nuclear challenge. Several observers, including Europeans, have argued that the U.S. has misinterpreted the role of nuclear weapons in Russia’s approach to conflict.¹⁵

Despite differences in assessments of nuclear risks and growing discord about Russia’s nuclear strategy, there are good arguments why NATO should follow the Trump administration in being more outspoken about Russia’s nuclear challenge. Even though NATO’s public elaboration of Russia’s nuclear challenge will not be easy, its benefits exceed the potential risks.

Many will oppose NATO’s stronger voice about the Russian nuclear challenge for fear that it might add a nuclear dimension to the growing tensions with Moscow and lead to a public backlash. Yet, Russia’s nuclear posturing will be part of the Euro-Atlantic security landscape for the foreseeable future, and NATO’s reluctance to talk about it will not alter this. There is already a nuclear dimension in the NATO-Russia relationship. President Putin’s speech on 1 March 2018 confirmed that.¹⁶

NATO’s silence may, in fact, exacerbate the Russian nuclear problem. Media reports make Russia’s nuclear provocations visible to the public no matter whether NATO says anything about them or not. In many cases, inaccurate reporting makes Russia’s nuclear signaling look even more threatening than it really is. The lack of clear NATO messaging also benefits Russia because it gives Moscow an uncontested space in which to create and present its own narrative. Moscow has a free ride on packaging highly disproportional steps as legitimate responses to U.S. and NATO actions. It is much easier for Russia to blur the distinction between its steps and actions taken by the Alliance.¹⁷

Another downside of NATO’s reluctance to provide the public more detailed information about Russia’s nuclear challenge is that it hampers efforts to create a convincing public narrative about the contribution of nuclear deterrence to the Alliance’s security. It sends a message to the public that NATO can afford to ignore Russia’s nuclear challenge and that no steps are necessary to address it. It also conveys a message that the Alliance does not have the courage of its own convictions—that it does not defend its nuclear policy because it does not believe it to be defensible. If Russia’s nuclear emphasis is not a solid justification for an Alliance recommitment to nuclear deterrence, then what is? The advocates of the Treaty on the Prohibition of Nuclear Weapons (TPNW) are free to condemn nuclear deterrence as illegitimate without giving any sound recommendation on how to address the growing nuclear threats to

democratic societies.¹⁸ The advocates of the TPNW are also free to put all nuclear weapon states into the same basket, blurring important distinctions between Russia's and NATO's approaches.

By being candid about Russia's nuclear challenge, NATO will demonstrate that Moscow's irresponsible rhetoric will not divide NATO, which seems to be the Russian leadership's goal. One interpretation of Putin's 1 March 2018 speech is that it was, at least in part, a direct response to the NPR. The public unveiling of exotic, highly-radioactive strategic capabilities, such as an intercontinental-range underwater drone, may be a message to U.S. political leaders and the American public about the risks associated with U.S. nuclear commitments to NATO allies. It may also be an attempt to create doubts in European capitals about U.S. willingness to face nuclear risks on their behalf. It may also be preparatory to a major reconfiguration and expansion of Russian strategic nuclear forces upon the expiration of the New START Treaty—a development that would test the U.S. commitment to maintaining nuclear forces “second to none” and the support of many U.S. allies for that policy. Under the pretext of responding to U.S. missile defense investments, Russia's leader may also want to convince Europeans that U.S. steps to strengthen deterrence in Europe will only lead to an arms race and instability. The lack of a firm voice from NATO about Russia's unacceptable and excessive threats, and NATO's low resolve to tackle them, may only strengthen the Kremlin's conviction that its approach is working.

The risks of NATO speaking up with a clear voice on Russia's nuclear challenge may be smaller than anticipated. The lack of negative public reactions to the NATO Secretary General's statements about Russia's nuclear behavior seem to suggest that. While NATO's Secretary General has rarely emphasized the nuclear component of Russia's actions, he has referred to it on several occasions.¹⁹ Interestingly, he has repeatedly spoken about Russia's nuclear challenges to German audiences.²⁰ Even though German society is seen as having strong anti-nuclear sentiment, the statements did not create any public outrage. On the contrary, there seems to be a growing recognition that lack of attention to nuclear threats to the Alliance would create more risks than benefits.²¹

More elaborate NATO descriptions of Russia's nuclear challenge could also address some deficiencies of the NPR pointed out by its critics. Primarily, the NPR unnecessarily refers to a Russian “escalate-to-deescalate” doctrine that diverts attention from the core problem with Russia's approach to nuclear weapons. A reference to a Russian “escalate-to-deescalate” doctrine implies certainty that Russia would employ nuclear weapons early in a conflict. Yet, a decision to use nuclear weapons would probably not go according to a script. The problem with Russia's approach to nuclear weapons is not certainty about what Russia would do but the ambiguities that Russia has deliberately created. As pointed out by Dr. Robert Soofer, U.S. deputy assistant secretary of defense for nuclear and missile defense policy, “we cannot know for certainty what would trigger [Russia's] limited nuclear use against NATO.”²² As the NPR and Trump administration officials have pointed out, this does not change the requirement that the United States

and its NATO allies have to be prepared for Russia's nuclear threats and employment early in the conflict.

Reference to "escalate-to-deescalate" is also misleading because it suggests that the core problem with Russia is that it is willing to use nuclear weapons to terminate the conflict. This blurs the distinction between Russia's strategy and the strategy of the NATO allies, including their strategy during the Cold War. In sharp contrast to NATO's approach, Russia's behavior suggests that it is willing to use nuclear weapons not only for defensive purposes but also for offensive ones.²³ NATO's description of Russia's nuclear strategy may better reflect this nuance than the NPR does.

The other merit of NATO's elaboration of Russia's nuclear challenge is that it can be presented in the broader context of Russia's approach to warfare.²⁴ NATO can show connections between nuclear and other elements of Russia's strategy. It goes without saying that before resorting to nuclear employment, Russia might prefer to use non-nuclear options to coerce the allies and terminate the conflict. Yet, the possibility that in some scenarios Russia would not use nuclear weapons does not mean that NATO should not be prepared for scenarios in which Russia would employ nuclear weapons. Also, NATO's greater confidence in facing nuclear threats from Russia would give the allies greater confidence during conventional combat which would probably be accompanied by Russian nuclear threats.

The question which remains is how NATO should go forward in becoming more vocal about the nuclear risks created by Russia. The best approach for the Alliance is not to simply repeat the assessment by the Trump administration expressed in the NPR. The Alliance should instead augment, refine and correct some deficiencies of the NPR. The lesson from the NPR for the Alliance should be that nuance, precision and details in descriptions of Russia's approach to nuclear weapons matter a lot in public discussions.

The NATO allies should start by publicly elaborating on what they mean by Russia's irresponsible and aggressive "military concept" referenced in the Warsaw Summit Communiqué. They could specify how they understand the roles that nuclear weapons play in Russia's overall approach to conflict and why the NATO allies are concerned about it. While the wording of the Warsaw Summit Communiqué was a good initial step, it has not been sufficient. The specific wording about the nuclear aspects of Russia's actions could be included in the upcoming Brussels Summit Communiqué. As the NATO allies have been analyzing the roles nuclear weapons play for Russia, they should not have a problem with agreeing on the text of a paragraph on this subject. If it became evident that the U.S. assessment of the Russia's nuclear problem is shared by the Alliance as a whole, it would make the NPR conclusions more convincing to a wider audience.

The public debate about Russia's nuclear strategy would be much more informed, if the United States and its NATO allies declassified and publicized more specific information about Russia's actions, especially exercises, in which Russia hints its readiness to use nuclear weapons to support conventional operations. It would be

a good response to the contention that publicly available sources do not provide convincing evidence that justifies increased anxiety about Russia's nuclear-related activities.²⁵ For this purpose, it would be advantageous if, at the Brussels Summit, the Allies commissioned the development of a nuclear communication strategy aimed at informing the public about nuclear developments that affect the Alliance's security. Given the sensitivity of nuclear issues as well as the growing need for the Alliance to talk publicly about them, such a strategy could make NATO's nuclear communication more purposeful. Apart from discussing goals and ways of nuclear communication, the strategy could suggest specific means of making the public better informed. A return to publishing communiqués after the ministerial meetings of the Nuclear Planning Group might be a step too far for some allies but reviving this practice could be beneficial. Moreover, the NATO Secretary General could give an annual speech dedicated solely to nuclear challenges to the Alliance that could include more detailed information about actions of Russia and other countries. Also, the NATO Secretary General's annual report could include more specific information about the topic than in previous years. NATO's overall strategy could help specific allies coordinate their messages to their publics.

Nuclear Supplements

According to the NPR, the “exploitable” gap in U.S. extended deterrence exists because Russia may mistakenly believe that the U.S. lacks good options to respond to limited nuclear strikes. In the U.S. assessment, existing options are either high-yield and thus disproportionate and inconsistent with the law of the armed conflict, or air-deliverable and therefore not sufficiently credible to reach targets defended by Russia’s integrated air defenses.²⁶ The U.S. solution to fix the perceived gap is to ensure that the U.S. President has “a range of limited and graduated options, including a variety of delivery systems and explosive yields.”²⁷ As a result, the Trump administration wants to supplement current U.S. nuclear forces with two low-yield options: a low-yield nuclear warhead for existing sea-launched ballistic missiles (SLBM), and in longer term a new sea-launched cruise missile (SLCM).

The U.S. decision to pursue new capabilities is consistent with NATO’s statement that “NATO must continue to adapt its strategy in line with trends in the security environment—including with respect to capabilities and other measures required—to ensure that NATO’s overall deterrence and defense posture is capable of addressing potential adversaries’ doctrine and capabilities, and that it remains credible, flexible, resilient, and adaptable.”²⁸ Yet, it goes against a post-Cold War trend of reducing the variety of nuclear capabilities available to the Alliance’s members. Likewise, the U.S. pursuit of low-yield options demonstrates that the results of the 2012 DDPR, while right at the time, no longer apply to the changed circumstances. While it was true in 2012 that “the Alliance’s nuclear force posture currently meets the criteria for an effective deterrence and defence posture” and that “existing mix of capabilities and the plans for their development are sound,” these judgements no longer apply today.²⁹ The profound implication for NATO is that the United States concluded that, to ensure the effectiveness of the Alliance’s deterrence posture, further adaptation is necessary beyond the decisions taken at the Warsaw Summit, which were still in the framework of the DDPR.

The U.S. decision to pursue new nuclear capabilities drew a lot of criticism, including from those who are not opposed to nuclear weapons but see the Trump administration initiatives as harmful to the trajectory that NATO has pursued since the end of the Cold War. In their view, the assessment that a deterrence gap exists is disputable. They see the projected new U.S. capabilities as redundant and counter-productive. For them, the high-yield response, existing low-yield options, and U.S. conventional capabilities are sufficiently credible and effective to deter Russia from resorting to nuclear weapons during a conflict. They also contend that the U.S. interest in new low-yield options betrays U.S. nervousness. As a side effect, instead of correcting Russia's "mistaken" assumption, these critics argue, the pursuit of new capabilities only strengthens the perception that the gap exists. There are also concerns that instead of showing determination to deter threats against allies, new low-yield options could imply that the U.S. is making a limited nuclear exchange more acceptable, thus making Europe safe for a limited nuclear war. Some observers also argue that U.S. military planners did not fully recognize the operational and crisis-stability risks created by new options, in particular the low-yield SLBM.³⁰

Despite all the criticism of U.S. supplemental capabilities, the NATO allies should publicly recognize their contribution to NATO's overall deterrence posture. They have good reasons to do so, even if they are not necessarily confident about the path taken by the Trump administration.

Skeptics about the existence of a deterrence gap with Russia may be right even though the absence of the gap is as difficult to prove as its presence. Deterrence is in the eye of the beholder. Knowing what would be sufficient for deterrence would require insight into thinking in the Kremlin, which is not constant and which might suddenly change during a conflict. Critics of the NPR may also be right that the U.S. assessment of the existence of a gap betrays a U.S. lack of self-confidence. Yet, what is often overlooked is that extended deterrence is not only about deterring an adversary and assuring allies. It is also about the self-confidence of the security guarantor who deters the adversary. It should be reassuring to U.S. European allies that the U.S. is taking steps to increase its own confidence about its ability to deter threats against them. The fact that the U.S. admits the existence of the gap and takes steps to close it is much better for the security of the NATO allies than a situation in which the U.S. only pretends to have confidence and might be paralyzed and unwilling to act during an actual crisis. The U.S. would not have to invest in the new capabilities if its only goal was deterring a nuclear attack against the continental United States. Therefore the U.S. investment in nuclear supplements should be seen as reassuring during a time of lingering concerns about the state of trans-Atlantic ties.

Critics may also be right when they express doubt that a lack of good U.S. response options is a source of the gap. Indeed, over the past decade anxieties about NATO's lack of nuclear cohesion, not about U.S. resolve and capabilities, were the main source of the gap. This, however, does not necessarily mean that Russia reads this situation in the same way. Critics are also right that U.S. investment in new nuclear capabilities

will not eliminate the risk of Russia's threat of nuclear use or actual employment early in a conflict. In some circumstances, Russia may see an early use as the best option. Moscow might see it as the alternative to conventional defeat or an inviting option to shock, awe, punish, or divide NATO. Russia's nuclear threats should be expected to be in the background of any aggressive action against the Alliance. Yet, even if new nuclear capabilities will not eliminate the prospect of Russia's nuclear use, they may narrow the number of scenarios in which Russia might be tempted to use nuclear weapons. They may induce some additional caution in the calculations of Russia's leaders.

The supplemental capabilities and options provide an added value to deterrence. Low-yield SLBM warheads, in comparison to existing low-yield U.S. capabilities, would offer an option of a prompt response, even in less than an hour, to any Russian use of nuclear weapons. In some scenarios, the prompt response might re-establish deterrence, including scenarios in which Russia's nuclear strikes are aimed at degrading NATO's conventional military capabilities. The low-yield SLBM warhead would also send a message that the U.S. will not engage in protracted, limited-theater nuclear war. First, the weapon could be used against targets within Russia's territory which Moscow's leaders value the most, not battlefield targets.³¹ Second, the yield of the "low-yield" weapon will probably be much higher than that of some low-yield weapons that Russia may possess.³² Third, the number of low-yield U.S. weapons will be limited. At some point, the U.S. would run out of low-yield options and a conflict could get out of control. In line with Thomas Schelling's concept of a "threat that leaves something to chance" Russia might be deterred from limited use by the prospect that it might lead to a full strategic exchange.³³ The potential for a U.S. response with a strategic weapon system in reply to Russia's limited use could be reassuring to U.S. allies. Historically, the NATO allies have been anxious about the linkage between the European theater and U.S. strategic nuclear forces. A low-yield SLBM warhead would contribute to strengthening the link.

The deployment of U.S. nuclear SLCMs would also have deterrence and assurance added value. SLCMs might make it more difficult for Russia to take psychological advantage of the growing disparity between NATO and Russian non-strategic nuclear weapons. If NATO allies or Russia doubted U.S. willingness to use an SLBM to respond to a low-yield theater attack, SLCMs could provide more flexible options for assurance and deterrence. To assure allies, SLCMs could be deployed to the European theatre without revealing their presence to Russia. If required, however, their presence could be exploited for signaling purposes. In some scenarios, SLCMs could offer advantages over dual-capable aircraft or bombers. In other scenarios, SLCMs could augment the options of using bombers or DCA, as they would complicate an adversary's planning. SLCMs could also augment U.S. options in a hypothetical scenario of simultaneous crises in Europe and in the Asia-Pacific region, because the U.S. would have more nuclear assets that could be dedicated to regional missions. In the long run, SLCMs on attack submarines could be a hedge against the potential vulnerability of U.S. SSBNs.³⁴ SLCMs, as with low-yield SLBMs, could be targeted at

what Russia values the most. This capability could send a message to Russia that even a battlefield use of nuclear weapons could have strategic consequences, and this may raise Russia's nuclear threshold.

What should not be overlooked is that stark differences between the U.S. and Russian arsenals of non-strategic nuclear weapons will remain. With the proposed new capabilities, the U.S. will not match the number or diversity of Russia's nuclear options, many of which have clear warfighting applications.

Despite the added value of low-yield SLBMs and SLCMs, it should not be forgotten that these are "supplemental" capabilities. They are not the core elements of U.S. extended deterrence. If the U.S. had to make a choice between obtaining these supplemental capabilities and maintaining its existing ones, the choice would be to modernize what the U.S. already has. If the risks posed by Russian low-yield and NSNW vanished, the supplemental capabilities might not be needed—at least in relation to Russia. These supplemental capabilities are also not silver bullets that would address all dilemmas of U.S. extended deterrence. They would not eliminate potential allies' anxieties about whether and how the U.S. would act on their behalf and would not guarantee cohesion of the Alliance during a nuclear crisis. Investment in nuclear hardware would not supplant the urgent requirement to invest more in nuclear software, including consultation processes, strategies, planning, and exercises.

What would be the best way for NATO to approach the supplemental capabilities? As the initial step: at the Brussels Summit, the NATO allies should recognize the Trump administration's decision to bolster the U.S. contribution to NATO's nuclear deterrence posture. The allies could develop with greater precision the NATO language on the traditional elements of NATO's nuclear posture. The endorsement would not have to include explicit references to U.S. nuclear capability supplements, making it easier for allies to agree on such a statement. As a blueprint, NATO could use the statement by the Japanese Foreign Minister approving the results of the NPR.³⁵ Anything going beyond a broad statement expressing support for U.S. efforts to strengthen America's nuclear contribution to NATO would be surprising but should be welcomed.

NATO's deliberations related to the supplemental U.S. nuclear capabilities should not, however, finish at the Brussels Summit. New capabilities demonstrate a need for NATO to reassess its nuclear strategy in the 21st century. NATO allies need to discuss how much nuclear flexibility against Russia is needed. The NPR is not the final voice in the Alliance debate, but it is a significant reference point. A related question is how augmented nuclear deterrence fits into the mix of NATO capabilities, which also includes conventional and missile defense forces. In the NPR there is no evident mix, and the stove pipes are obvious. In this regard, the NPR is in line with the post-Cold War trend of detaching nuclear weapons from other elements of the Alliance's posture. NATO may face the task of transforming various inputs of the Trump administration into a coherent whole.

The U.S. Missile Defense Review (MDR) is likely to have an impact on the discussion. It is possible that the MDR will conclude that regional missile defenses

in Europe should have a role vis-à-vis Russia. A missile threat from Russia was not perceived in 2010 when the U.S. concluded its Ballistic Missile Defense Review and NATO endorsed territorial missile defense, nor in 2012 when NATO concluded the DDPR. Given the many repeated statements by NATO that its missile defense is not directed against Russia, changing NATO's missile defense policy might be even more difficult for some allies to accept than coming to terms with the new U.S. nuclear capabilities.

Collective Nuclear Deterrence

The strong and uncontroversial element of continuity in the U.S. nuclear policy that the NPR highlights is the importance of the traditional U.S. contributions to NATO's nuclear deterrence posture.

The NPR reaffirms the value of the strategic triad as a bedrock of the U.S. extended deterrence commitments. The modernization of these forces is intended to ensure that they would remain effective as the supreme guarantee of NATO security for the foreseeable future. However, the NPR is clear about the “programmatically risks” related to a strategic modernization. In contrast to the previous NPR in 2010, a failure to proceed with modernization would have grave consequences because there is no margin for delaying U.S. sustainment and replacement programs.³⁶ For these reasons, the NATO allies must look closer at Washington's efforts to recapitalize the U.S. nuclear arsenal and supporting infrastructure. The credibility of the U.S. strategic nuclear forces in the future should not be taken for granted.

The NPR also reiterates the need to maintain NATO's nuclear sharing arrangements. It emphasizes the deterrence and assurance value of the U.S. non-strategic nuclear weapons based in Europe and carried by U.S. and allied dual capable aircraft (DCA). It confirms the U.S. commitment to nuclear-certify the F-35 and to extend the life of the B-61 nuclear gravity bomb. Finally, it stresses that the U.S. will promote the “broadest possible participation of Allies in their agreed burden sharing arrangements regarding the DCA mission, nuclear mission support, and nuclear infrastructure.”³⁷ These statements are in line with NATO's agreed-upon policy and official language.

The NPR goes beyond NATO's public statements by listing concrete steps that could make NATO's nuclear sharing arrangements more effective. It calls for enhancements, where needed, in the readiness, survivability and operational effectiveness of NATO DCA; a more realistic training and exercise program; and the modernization of NATO nuclear command-and-control. The Trump administration, following the policy of the

Obama administration, also emphasizes the need to integrate nuclear and non-nuclear military planning, training and operations.³⁸ The NPR highlights the U.S. commitment to organize and resource America's Combatant Commands, including the U.S. European Command (EUCOM), for this particular mission, and to coordinate integration activities with allies facing nuclear threats. The other new element of the NPR is that the U.S. has made its contribution to the nuclear sharing arrangements more transparent. It publicly discloses the information that the only U.S. dual-capable aircraft in Europe are F-15E Strike Eagles.³⁹

The U.S. investment in supplemental nuclear capabilities has implications for NATO's collective deterrence. The decision shows the limits of further strengthening the nuclear sharing arrangements based on current capabilities, and projected contributions of European allies. It implicitly suggests that the U.S. has concluded that the only possible means of reinforcing NATO nuclear deterrence is to invest in the new U.S. capabilities.

The supplemental U.S. nuclear capabilities also raise important questions about the scope of NATO consultations and nuclear planning. The NPR makes it clear that, in some scenarios, the supplemental capabilities might provide an optimal nuclear response option. However, only DCA assigned to NATO are part of the regular NATO nuclear consultations. This means that NATO allies would have much more limited influence on any U.S. decision to use other nuclear capabilities, including strategic nuclear forces or SLCMs. In line with the 1962 Athens Guidelines, the United States will consult the allies if time and circumstances permit.⁴⁰ As in some circumstances consultations might not be feasible, this might lead to anxieties and concerns within NATO that the U.S. might use these weapons too soon or too late. The lack of regular consultations on the potential use of nuclear capabilities other than DCA could make it much more difficult for the allies to signal their unity and common resolve during a crisis.

How should the NATO allies react to the NPR language on nuclear sharing arrangements? There are some concrete steps that could be taken at the Brussels Summit, while some issues must become a part of longer and more extensive discussions.

The Brussels Summit will provide a good venue for the recommitment of the allies to maintaining a collective nuclear deterrence option based on B-61 bombs and DCA. The NPR shows the need for a better and more convincing narrative about the contribution of DCA to NATO's overall nuclear posture. While the NPR expresses confidence in the value of the DCA mission, it does not elaborate. Instead, while advocating supplemental capabilities, it highlights scenarios in which the use of DCA would not be optimal—such as a situation in which Russian air defenses would not be significantly degraded. The NATO allies should make it clear that, in some scenarios, the use of DCA would be the optimal choice. The political value of DCA in demonstrating cohesion and resolve hinges upon a credible message that these weapons could be used.

The statement would, however, be meaningless if respective European governments failed to invest in new nuclear-capable aircraft to replace their aging fleets. In contrast

to the supplementary nuclear capabilities envisioned by the United States, the effectiveness of NATO DCA does not depend solely on the U.S., but on other NATO allies as well. While the U.S. is fulfilling its part by retaining and modernizing its capabilities, the outlook is less clear with regard to European allies.⁴¹

What the allies should undertake as a task after the summit is a clear definition of a relationship between a collective nuclear mission based on DCA and other means to respond to a nuclear attack, including the projected U.S. supplementary nuclear capabilities. While the U.S. has a clear narrative about the role of each element of the strategic nuclear triad in deterring attack against the United States, there is no similar narrative about the contribution of different capabilities to regional deterrence. The U.S. and its NATO allies could jointly fix this problem. They could do so as a part of a broader discussion on NATO's nuclear strategy and its relationship to other elements of the overall mix of capabilities, including conventional forces and missile defenses.

The NATO allies should also promote a broadening of the Alliance's regular nuclear consultations by adding other nuclear capabilities, including the planned U.S. nuclear supplementary capabilities. Broadening the scope of NATO's nuclear consultations could provide a good solution to the problem that, in certain scenarios, a nuclear response with DCA and the B-61 bomb might not be optimal, and the other NATO allies may not have much influence on U.S. actions. The same approach could apply to the U.S. extended deterrence in Northeast Asia, where Japan and South Korea have advocated deeper nuclear consultations with Washington.

Maintaining the nuclear sharing arrangements would strengthen NATO's position to promote an expansion of nuclear consultations by adding the supplementary U.S. nuclear capabilities. If NATO allies do not do what is required to make the DCA mission effective, how can they ask for more? Strengthening the effectiveness of NATO DCA might also narrow the circumstances in which any use of U.S. nuclear capabilities, including the proposed new supplements, will be required. The stronger the contribution of the allies to NATO's nuclear policy and posture, the louder their voice.

Disarmament and Arms Control

The NPR drew criticism from some European observers for backtracking from the Obama administration's goal of creating the conditions for a world without nuclear weapons. While the Trump administration reaffirms the U.S. commitment to "the ultimate elimination of nuclear weapons," it places less emphasis on it in comparison to the previous administration. Rather than highlighting America's long-standing nuclear disarmament aspiration, the NPR mentions it only a couple of times and only together with biological and chemical disarmament. While the 2018 NPR makes an explicit reference to the Non-Proliferation Treaty, there is no explicit reference to Article VI⁴² as in the 2010 NPR. Instead of indicating desired benefits of nuclear disarmament, the 2018 NPR highlights preconditions to achieving this goal, in particular "a fundamental transformation of the world political order."⁴³ The desirability of the disarmament goal is challenged by the assessment that nuclear weapons have contributed to nuclear non-proliferation and to preventing periodic and catastrophic wars among the Great Powers.⁴⁴

For NATO, balancing deterrence and disarmament priorities has been the foundation of internal nuclear consensus over the past decade. In the 2010 Strategic Concept, the allies recognized that "as long as nuclear weapons exist, NATO will remain the nuclear alliance" and in the same time confirmed that NATO "will seek conditions for nuclear weapons free world."⁴⁵ The re-emphasis of the importance on nuclear deterrence in the Warsaw Summit Communiqué was balanced with language on disarmament, including the first direct reference to Article VI of the NPT in NATO Summit Communiqué. The negotiation at the Warsaw Summit of the four Communiqué paragraphs committing NATO to steps to enhance its nuclear posture (paragraphs 51-54) were linked to the agreement on the four paragraphs underlying importance of arms control, disarmament, and non-proliferation (paragraphs 62-65).⁴⁶

In reaction to the NPR, the NATO allies should seek an agreement with the U.S. that upholds established Alliance policy. In fact, the Warsaw Summit Communiqué provides a

good solution for the Brussels Summit on how to synchronize the Trump administration's approaches with those of the other allies. The Communiqué states that "The Alliance reaffirms its resolve to seek a safer world for all and to create the conditions for a world without nuclear weapons in full accordance with all provisions of the NPT, including the Article VI, in a step-by-step and verifiable way that promotes international stability, and is based on the principle of undiminished security for all."⁴⁷ The conditions to the achievement of the nuclear disarmament goal included in the statement are consistent with those listed in the NPR. The Trump administration should not find it difficult to agree with NATO's approach. U.S. officials have corrected the criticism of the NPR by explicitly confirming the U.S. commitment to Article VI.⁴⁸

Consensus within the Alliance may be more difficult to achieve with regard to arms control. On the one hand, there are similar themes in the Trump administration and NATO approaches. U.S. interest in "a prudent arms control agenda" and U.S. commitment to "arms control efforts that advance U.S., allied, and partner security; are verifiable and enforceable; and include partners that comply responsibly with their obligations" are in line with NATO's policy.⁴⁹ The Trump administration's skepticism about rapid progress in arms control does not differ from NATO's assessment.⁵⁰ Likewise, the U.S. interest in the reduction of Russia's non-strategic nuclear weapons reflects a long-term NATO aspiration. The NPR is also consistent with the NATO allies' preference for exhausting diplomatic pathways to seek every opportunity to make arms control work. For example, the Trump administration has reaffirmed the U.S. commitment to seek a diplomatic resolution of the INF Treaty compliance dispute through all viable channels, including the INF Treaty's Special Verification Commission.⁵¹

What makes the Trump administration and NATO policy different is an approach on how to bring Russia into compliance with existing arms control agreements and how to create conditions for new ones.

The NPR underlines that the status quo, in which the United States continues to comply while Russia continues deployments in violation of the INF Treaty, is untenable.⁵² Following the Trump administration's INF Treaty Integrated Strategy, the NPR signals that the U.S. might withdraw from the Treaty in the future. As an initial step which does not violate the treaty, the U.S. will review "military concepts and options for conventional, ground - launched, intermediate -range missile systems."⁵³ This may contrast with the positions of some allies who think that the INF Treaty should be upheld even if Russia violates it.⁵⁴

For the Trump administration, the pursuit of SLCMs "may provide the necessary incentive for Russia to negotiate seriously a reduction of its non-strategic nuclear weapons, just as the prior Western deployment of intermediate-range nuclear forces in Europe led to the 1987 INF Treaty."⁵⁵ The NPR also states that "If Russia returns to compliance with its arms control obligations, reduces its non-strategic nuclear arsenal, and corrects its other destabilizing behaviors, the United States may reconsider the pursuit of a SLCM."⁵⁶ In contrast, the approach to arms control of some allies has been built on the premise that Russia will eventually become interested in a true partnership

with the Alliance and will rediscover the value of transparency, predictability, limitations and reductions. For these allies, investments in any bargaining chips are unnecessary and counter-productive as they only lead to new steps in the nuclear arms race.⁵⁷

Another element of the Trump administration's arms control policy is that it underlines the fact that Russia's violation of the INF Treaty will have a negative effect on prospects for strategic arms control. According to the NPR, "Concluding further agreements with a state in violation of multiple existing agreements would indicate a lack of consequences for its non-compliance and thereby undermine arms control broadly."⁵⁸ For some Europeans, there is no link between the INF Treaty and strategic arms control and they call on the U.S. and Russia to extend the New START Treaty as soon as possible or begin talks on a follow-on treaty.⁵⁹

There are good reasons why NATO's nuclear arms control approach should move closer to that of the Trump administration. The Alliance's arms control policy has not come to terms with the radically changed European security environment. The Trump administration makes a valid point: restrained responses and dialogue have not persuaded Russia to comply with several of its political and legal obligations. There are persisting concerns about Russia's failure to honor its commitments in the 1991-1992 Presidential Nuclear Initiatives, Russia's suspension of the compliance with the Conventional Armed Forces in Europe Treaty, Russia's selective implementation of the Vienna Document and Open Skies Treaty, and Russia's lack of respect for its commitments made in the 1997 NATO-Russia Founding Act.

However, what shows a lack of consequence in the Trump administration's approach to arms control is that the resolve to investing into arms control bargaining chips is not linked with a clear message that the United States will pro-actively seek to create conditions for arms control agreements. As noted by one observer, instead of being "the demandeur" for further nuclear reductions with Russia, the Trump administration seems to take passive position by communicating that it "stands ready" to "consider" further arms control measures in the certain conditions.⁶⁰ Moreover, the conditions in which the Trump administration may reconsider its investments in the SLCMs are broad enough to create an impression that the U.S. is not really interested in arms control. Apart from the Russia's return to compliance to the INF Treaty and Russia's reductions of its non-strategic nuclear weapons, the NPR adds a vague condition that Russia should also "corrects its other destabilizing behaviors".

U.S. and allied positions on arms control may not come closer before the Brussels Summit. The easy course for NATO would be to repeat some past statements on the importance of arms control and to call for Russia's full compliance to the INF Treaty and other accords.⁶¹ As a step further, the allies could decide to develop a new nuclear arms control strategy that would be better aligned with the re-emergence of a competitive relationship with Russia. The broader strategy could include some elements of the approach proposed by the Trump administration. It could, however, be instrumental in giving the U.S. arms control efforts more positive and proactive spin and make them a part of an approach supported by all NATO allies.

In a framework of broader discussions about its approach to arms control, NATO should update its policy on seeking reciprocal reductions in non-strategic nuclear weapons with Russia. In the 2012 DDP, the Allies expressed interest in reciprocal transparency and confidence-building related to this category of nuclear arms. They also stated that “NATO is prepared to consider further reducing its requirement for non-strategic nuclear weapons assigned to the Alliance in the context of reciprocal steps by Russia,” and that NATO would further consider what reciprocal Russian actions would allow for significant reductions in forward-based NSNW assigned to NATO.⁶² Ultimately, NATO allies have never reached a point in which they were able to give Russia a concrete proposal of how to move forward. U.S. SLCMs could become a part of a proactive approach seeking Russia’s reciprocity in reductions of non-strategic nuclear weapons. This might be especially important if the U.S. decided to give more attention to non-strategic nuclear weapons in nuclear stability talks with Russia.⁶³ Even if Russia will not be interested, the U.S. and its NATO allies will demonstrate their commitment to reducing nuclear risks through diplomatic means. As noted by Robert Bell: “It is hard to reach agreement on nuclear arms reductions when both sides are trying; it is impossible when neither side is trying.”⁶⁴ It would also help to maintain NATO’s cohesion on nuclear deterrence matters.

When it comes to the INF Treaty, the NATO allies may take an advantage of the approach of the Trump administration. They should continue to support U.S. active diplomatic measures to convince Russia to return to full compliance. In addition, they could declare that even if currently they see no requirement to deploy conventional-warhead, intermediate-range, ground-launched missiles in Europe, they will constantly review the implications of Russia’s INF Treaty violation for European security. Without committing the NATO allies to host U.S. systems, the ambiguous declaration might make Russia more reluctant to deploy a greater number of the prohibited missiles.

In this context, NATO allies might also help the United States to clarify a linkage between nuclear SLCMs and the INF Treaty. They could, for example, state that the SLCMs constitute a response to overall Russia’s non-strategic arsenal, including the potential nuclear capability of Russian missiles that violate the INF Treaty. If Russia returns to compliance with the INF Treaty but anxieties about Russia’s non-strategic arsenal persist, nuclear SLCMs would remain a part of the Alliance efforts to seek reciprocal reductions in non-strategic nuclear weapons.

If a new consensus on the NATO arms control policy would not be found and the Europeans would not provide alternative solutions, the U.S. might pursue its arms control agenda with Russia alone; that is, with fewer and less extensive consultations with allies.⁶⁵ U.S. SLCMs could be deployed in waters around Europe without European consent. In response to Russia’s INF Treaty violation, the U.S. does not have to deploy ground-launched intermediate-range weapons in Europe. Even if such capabilities are unnecessary in Europe, the U.S. might still find conventional-warhead ground-launched missiles useful to augment strike capabilities in the Asia-Pacific region.⁶⁶ The new missiles could also be based in the continental United States with an option to deploy

them in any region if required. The bottom line is that divisions within NATO on how to create conditions for effective arms control in Europe would be beneficial to Russia. Moscow could take advantage of its unilateral treaty violations by being the only party to deploy prohibited systems or exploiting the divisions within NATO in a situation in which U.S. response to the treaty violation would meet opposition of some NATO allies. It is in the interest of the U.S. and its NATO allies to find a compromise and craft a new nuclear arms control approach.

Nuclear Declaratory Policy

The NPR stresses that the United States would only consider the employment of nuclear weapons in “extreme circumstances” to defend the vital interests of the United States, its allies, and partners. It is similar to NATO’s long-held policy that nuclear use might be contemplated in “extremely remote” circumstances.⁶⁷

The U.S. declaration that nuclear capabilities contribute to deterring nuclear and non-nuclear strategic attack is also in line with NATO’s position. The Alliance has reserved the right to use nuclear weapons first in response to non-nuclear attacks. The Warsaw Summit Communiqué retains the ambiguity: “If the fundamental security of any of its members were to be threatened however, NATO has the capabilities and resolve to impose costs on an adversary that would be unacceptable and far outweigh the benefits that an adversary could hope to achieve.”⁶⁸

What differs in the U.S. and NATO approaches is the Trump administration’s public specificity about non-nuclear strategic attacks that might warrant a nuclear response. According to the NPR, such attacks “include, but are not limited to, attacks on the U.S., allied, or partner civilian population or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities.”⁶⁹ In contrast to the U.S., the NATO allies collectively have refrained from hinting at any specific scenarios in which nuclear weapon use might be contemplated.

The 2018 NPR repeats the negative security assurances included in the 2010 NPR. The U.S. continues to promise not to use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear non-proliferation obligations. This implies no changes in NATO’s nuclear policy. The 2012 DDP, in carefully crafted language, recognized the importance of the assurances made independently by all three NATO nuclear weapon states (Britain, France, and the United States).⁷⁰

The 2018 NPR, however, signals that the circumstances in which the assurances might be revised are broader than in the 2010 NPR. The U.S. reserves the right to revoke the assurances depending on “the evolution and proliferation of non-nuclear strategic attack technologies and U.S. capabilities to counter that threat.”⁷¹ While this caveat does not appear to have any an impact on NATO’s current nuclear deterrence policy, there may be different views within NATO on how it affects the Alliance’s nuclear non-proliferation policy. On the one hand, it sends the message to the NPT non-nuclear-weapon states that their nuclear abstention does not guarantee that they will not become nuclear targets in the future. If they develop non-nuclear means with effects comparable to those of nuclear weapons, the U.S. and thus NATO nuclear deterrence would be addressed to them as well. On the other hand, the possibility that the U.S. may change its negative security assurances remains remote at present.

Despite the changes in the NPR, the prudent decision for the NATO allies is to retain the existing language on the circumstances of possible nuclear weapon use and on negative security assurances. The current ambiguity serves NATO well. As one U.S. expert notes, the debate surrounding changes in the U.S. declaratory policy demonstrated that the updated language was “a self-inflicted wound that will likely fester for some time.”⁷² NATO does not have to repeat that experience. The Brussels Summit Communiqué should not go beyond the declaratory policy articulated at the Warsaw Summit.

Continuity of ambiguity, however, does not change the need for NATO efforts to build an internal consensus on the role of nuclear weapons against 21st-century non-nuclear strategic threats. During the Cold War, catastrophic effects on population could be imposed by large-scale conventional attacks or the use of weapons of mass destruction. The NPR implicitly suggests that this is no longer the case and allows scope for a broader range of nuclear-use contingencies in a confrontation with a nuclear-armed adversary. The U.S. approach seems to converge with the French position that nuclear deterrence must preserve the “life” of the nation “whatever the means used by the state adversary.”⁷³ However, given the U.S. negative security assurances, the circumstances in which the U.S. might contemplate nuclear use against non-nuclear-weapon state adversaries remain narrower than in the case of France. In the eyes of some allies, the NPR nonetheless expands the role of nuclear weapons. A new consensus within NATO might be possible only with a shared understanding that nuclear deterrence is primarily oriented at preventing attacks causing catastrophic “effects,” not at negating the “means” of such an attack, with an important exception of nuclear weapons. This implies that the Alliance’s reliance on nuclear weapons should be primarily measured with reference to what kinds of “attacks” nuclear weapons deter, not what kinds of “means” they deter. Such an approach would, however, be rejected by those who think that the sole purpose of nuclear weapons should be to deter nuclear attacks.

Efforts to build a new consensus on the role of nuclear weapons against non-nuclear strategic attacks could be a part of a broader NATO discussion about how the Alliance’s

nuclear strategy could be aligned with the needs of the 21st century. Such discussions could also be used by the U.S., France, and the U.K. to more closely coordinate their nuclear policies. For example, the NPR threatens nuclear retaliation in response to an adversary's nuclear or non-nuclear strategic attack on allied nuclear forces and their enablers. One question is whether the U.K. and France would adopt a similar approach. Also, it remains to be seen if the U.K., as in 2010, will update its negative security assurances by making them more aligned with those made by the U.S.

The Brussels Summit and Beyond

The NATO allies must react to the nuclear policy and posture choices of the Trump administration. Given their significant implications for the Alliance, the allies cannot sweep their reactions under the rug. The NATO Summit in Brussels will be an important indicator of which of NPR's choices were fully endorsed by all allies and which met their skepticism. It is, however, unrealistic to expect that the NATO allies will be able to resolve all the questions posed by the NPR at the Summit. There will be a need for in-depth debate in the coming years.

While the level of ambition for the Brussels Summit should not be set high, there are several things that the NATO allies should be able to agree upon. This includes more specific language about the Russia nuclear challenges, general recognition of U.S. efforts to bolster NATO nuclear deterrence posture, a clear language on the value of nuclear sharing arrangements, and reaffirmation of some of NATO's statements on arms control and disarmament. In each of these cases, the NATO allies would have a chance to carry forward on the U.S. statements in the NPR. As at the Warsaw Summit, the Brussels Summit's language on strengthening NATO nuclear deterrence posture could be balanced with the language re-committing the Allies to pursue their arms control, disarmament, and non-proliferation goals.

Yet, a signal in Brussels of NATO's efforts to build a new nuclear consensus would be stronger if heads of state and government initiated a broader process aimed at exploring whether the Alliance has come to terms with the changed European and global security landscape. NATO's aim should be to develop a comprehensive deterrence and defense strategy that would treat nuclear deterrence as an integral part of a multi-domain approach. One lesson of the NPR is that the stove-piping of nuclear issues is unhelpful. The comprehensive approach would also enable the NATO allies to react to other strategic documents of the Trump administration, in particular the National Security Strategy, the National Defense Strategy, and the Missile Defense

Review. It would also enable to take stock of changes in strategic documents of other NATO allies.

The strategy-building-process would help to incorporate, and if needed refine or modify, into NATO's policy those Trump administration decisions that revise NATO's post-Cold War nuclear trajectory beyond the adaptation measures taken by NATO in recent years, and on which the NATO allies may not reach consensus before the Brussels Summit. NATO should clarify the contribution of different nuclear capabilities to NATO's overall "modern" deterrence concept, and concrete steps that should be taken to ensure the political, military, operational, and institutional coherence between different elements of its posture. The arms control part of the strategy could be instrumental in taking steps to bolster deterrence as a part of the proactive initiative aimed at strengthening NATO's security through diplomatic means. The communication part of the strategy should design ways to most effectively present NATO nuclear policy to the public as an important element of an overall effort to strengthen NATO security.

The question is whether a new NATO strategy makes much sense until there is a new NATO Strategic Concept. The argument can be made that the 2010 Strategic Concept cannot be a basis for a new deterrence strategy, as it no longer corresponds to the dramatic change in European security since 2014. Does it make any sense for the allies to develop the strategy in a framework of the outdated 2010 Strategic Concept? As the 2010 consensus on the Strategic Concept preceded the 2012 consensus on the Deterrence and Defence Posture Review, the new Strategic Concept should precede the deterrence strategy. Yet, currently there seems to be no appetite within NATO to start the process of developing the Strategic Concept. There is still not sufficient convergence within the Alliance on some fundamental issues, including how to define the Alliance relationship with Russia. Some allies may also calculate that it is better to put off the discussions on a new Strategic Concept, and related strategic issues, until the "Trump era" is over.⁷⁴ The Trump administration decision to withdraw from the agreement with Iran on the Joint Comprehensive Plan of Action (JCPOA), despite European efforts to preserve the deal, may strengthen the perception of some U.S. allies that attempts toward changing the U.S. perspective may be futile. The NATO Summit in Brussels will be the first real test of how President Trump and his national security team are working on reaching the consensus within the Alliance on difficult issues.

Yet, despite the above arguments, there are compelling reasons why the Alliance should initiate work on the comprehensive strategy at the Brussels Summit. The lack of the new Strategic Concept should not preclude a strategic debate. As a part of current committee deliberations within NATO, the allies could analyze different options of NATO's overall deterrence and defense, arms control, and communication strategy, and assess which of these options could be pursued now and which only after the consensus on the new Strategic Concept is reached. Such approach may bring different allied perspectives closer.

The sooner the discussions on how to harmonize NATO's approach to deterrence and arms control begin, the greater is the chance that the other NATO allies would influence

the U.S. position. Once the United States would start further clarifying implementing policies laid down in the NPR, altering them would be much harder for the U.S. allies. It is also in the interest of the United States to pursue its policies with as broad support of U.S. allies as possible. While there may be some strong disagreements between the United States and its allies on how to address some global security challenges, including nonproliferation and regional challenges posed by Iran, efforts should be made to keep the NATO allies on the same page when it comes to preserving security and stability in the Euro-Atlantic area.

Following the Trump administration's release of its strategic documents, including the Nuclear Posture Review, in-depth debate within the Alliance is necessary; sooner or later, NATO will have to communicate the results to the public, and to potential adversaries.

Notes

- 1 Articles by David S. Yost provide a valuable source on how U.S. extended deterrence and NATO nuclear policy have evolved since the end of the Cold War. See: David S. Yost, 'The Delegitimization of Nuclear Deterrence?', *Armed Forces & Society*, vol. 16, no. 4, 1990, pp. 487-507; David S. Yost, 'The US and Nuclear Deterrence in Europe', *The Adelphi Papers*, vol. 39, no. 326, 1999; David S. Yost, 'The US Nuclear Posture Review and the NATO allies', *International Affairs*, vol. 80, no. 4, 2004, pp. 705-729; David S. Yost, 'Assurance and US extended deterrence in NATO', *International Affairs*, vol. 85, no. 4, 2009, pp. 755-780; David S. Yost, 'The US debate on NATO nuclear deterrence', *International Affairs*, vol. 87, no. 6, 2011, pp. 1401-1438; David S. Yost, 'NATO's Deterrence and Defense Posture after the Chicago Summit', *Naval Postgraduate School*, November 2012, <https://calhoun.nps.edu/bitstream/handle/10945/34350/nps62-121212-02.pdf?sequence=1>.
- 2 Walter Slocombe, 'Is there still a role for nuclear deterrence?', *NATO Review*, vol. 45, no. 6, November-December 1997, <https://www.nato.int/docu/review/1997/9706-07.htm>.
- 3 Jacek Durkalec, 'Nuclear-Backed "Little Green Men:" Nuclear Messaging in the Ukraine Crisis', *Polish Institute of International Affairs*, Warsaw, July 2015, pp. 29-31.
- 4 Jacek Durkalec, 'NATO Nuclear Adaptation at the Warsaw Summit' [in:] *NATO and Collective Defense in The 21st Century: An Assessment of the Warsaw Summit*, K. Friis (ed.), Routledge 2017, pp. 41-51.
- 5 Amy F. Woolf, 'Nonstrategic Nuclear Weapons', *Congressional Research Service*, RL32572, 13 February 2018, p. 21, <https://fas.org/sgp/crs/nuke/RL32572.pdf>; U.S. Department of Defense, 'Report of the Secretary of Defense Task Force on DoD Nuclear Weapons Management. Phase II: Review of the DoD Nuclear Mission, December 2008', p. 59, <https://www.defense.gov/Portals/1/Documents/pubs/PhaseIIReportFinal.pdf>.
- 6 Amy F. Woolf, *op. cit.*, p. 21.
- 7 'New German government to seek removal of US nuclear weapons', *DW*, 25 October 2009, <http://www.dw.com/en/new-german-government-to-seek-removal-of-us-nuclear-weapons/a-4824174>.
- 8 Jeffrey A. Larsen, 'The Future of U.S. Non-Strategic Nuclear Weapons and Implications for NATO. Drifting Toward the Foreseeable Future', *NATO Public Diplomacy Division*, 31 October 2006, p. xi, <http://www.bits.de/NRANEU/docs/311006.pdf>.
- 9 NATO, 'Joint Press Conference at Faslane by NATO Secretary General Jens Stoltenberg, with UK Secretary of State for Defence Sir Michael Fallon', 29 September 2017, https://www.nato.int/cps/su/natohq/opinions_147470.htm.
- 10 Vincent A. Manzo, Aaron R. Miles, 'The Logic of Integrating Conventional and Nuclear Planning', *Arms Control Association*, November 2016, https://www.armscontrol.org/ACT/2016_11/Features/The-Logic-of-Integrating-Conventional-and-Nuclear-Planning; 'Exploring the Requirements of Integrated Strategic Deterrence. Workshop Report', *Center for the Study of Weapons of Mass Destruction*, National Defense University, Center for Global Security Research, Lawrence Livermore National Laboratory, August 2017, p. 4, https://cgsr.llnl.gov/content/assets/docs/ISD_Workshop_AAR_pib_080817_FINAL_for_Posting.pdf.
- 11 NATO, 'NATO's nuclear deterrence policy and forces', 17 May 2018, https://www.nato.int/cps/en/natohq/topics_50068.htm.
- 12 US Department of Defense, 'Nuclear Posture Review 2018' [hereafter NPR], February 2018, pp. 8-9, 53-54.

- 13 NATO, 'Warsaw Summit Communiqué,' 9 July 2016, par. 10.
- 14 Ibid., par. 54.
- 15 See: Kristin Ven Bruusgaard, 'The Russian Rogue in the New Nuclear Posture Review' [in:] Policy Roundtable: The Trump Administration's Nuclear Posture Review, Texas National Security Review, 13 February 2018, <https://tnsr.org/roundtable/policy-roundtable-trump-administrations-nuclear-posture-review/#essay8>; Olga Oliker and Andrey Baklitskiy, 'The Nuclear Posture Review and Russian 'De-Escalation': A Dangerous Solution to a Nonexistent Problem', War on the Rocks, 20 February 2018, <https://warontherocks.com/2018/02/nuclear-posture-review-russian-de-escalation-dangerous-solution-nonexistent-problem/>.
- 16 President of Russia, 'Presidential Address to the Federal Assembly', 1 March 2018, <http://en.kremlin.ru/events/president/news/56957>.
- 17 See, for example: The Ministry of Foreign Affairs of the Russian Federation, 'Foreign Minister Sergey Lavrov's statement at the Conference on Disarmament, Geneva, February 28, 2018', http://www.mid.ru/en/foreign_policy/news/-/asset_publisher/cKNonkJE02Bw/content/id/3102270.
- 18 Brad Roberts, 'Ban the Bomb? Or Bomb the Ban? Next Steps on the Ban Treaty', ELN Policy Brief, March 2018, <https://www.europeanleadershipnetwork.org/wp-content/uploads/2018/03/180322-Brad-Roberts-Ban-Treaty.pdf>
- 19 'Adapting to a changed security environment', Speech by NATO Secretary General Jens Stoltenberg at the Center for Strategic and International Studies (CSIS) in Washington D.C., 27 May 2015, https://www.nato.int/cps/ua/natohq/opinions_120166.htm?selectedLocale=en; NATO, 'The Secretary General's Annual Report 2015', February 2016, p. 19; 'Remarks by NATO Secretary General Jens Stoltenberg at United States Strategic Command (USSTRATCOM) in Nebraska', 12 April 2018, https://www.nato.int/cps/en/natohq/opinions_153428.htm.
- 20 Speech by NATO Secretary General Jens Stoltenberg at the Munich Security Conference, 13 February 2016, https://www.nato.int/cps/en/natohq/opinions_128047.htm; Remarks by NATO Secretary General Jens Stoltenberg at the opening session of the Munich Security Conference, 16 February 2018, https://www.nato.int/cps/en/natohq/opinions_152209.htm; 'Nato must improve defences against a 'more aggressive' Russia, says chief', The Guardian, 18 March 2018, <https://www.theguardian.com/world/2018/mar/18/nato-must-improve-defences-against-a-more-aggressive-russia-says-chief>.
- 21 Claudia Major, 'Germany's Dangerous Nuclear Sleepwalking', Strategic Europe, Carnegie Europe, 25 January 2018, <http://carnegieeurope.eu/strategieurope/75351>.
- 22 SASC-SF Hearing on the President's Fiscal Year 2019 Budget request for Strategic Nuclear Forces. Dr. Robert Soofer, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense, 11 April 2018, p. 3.
- 23 Jacek Durkalec, 'Nuclear-Backed "Little Green Men:" Nuclear Messaging in the Ukraine Crisis'.
- 24 See: Dave Johnson, 'Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds', Livermore Papers on Global Security, No. 3, February 2018; Kristin Ven Bruusgaard, 'Russian Strategic Deterrence', Survival, vol. 58, no. 4, August–September 2016, pp. 7-26.
- 25 Bruno Tertrais, 'Russia's Nuclear Policy: Worrying for the Wrong Reasons', Survival, vol. 60, no. 2, April–May 2018.
- 26 Gen. John Hyten, Nuclear Posture Review Discussion at National Defense University, 16 February 2018, <http://www.stratcom.mil/Media/Speeches/Article/1446542/nuclear-posture-review-discussion-at-national-defense-university/>; NPR, p. 23.
- 27 NPR, p. 55.
- 28 'Warsaw Summit Communiqué, par. 52.
- 29 NATO, 'Deterrence and Defense Posture Review' [hereafter D DPR], 20 May 2012, par. 8, 31.
- 30 For critical arguments on NPR, see: John Gower, 'The Dangerous Illogic of Twenty-First-Century Deterrence Through Planning for Nuclear Warfighting', Carnegie Endowment for International Peace, March 2018, <http://carnegieendowment.org/2018/03/06/dangerous-illogic-of-twenty-first-century-deterrence-through-planning-for-nuclear-warfighting-pub-75717>; Matthew Harries, 'A Nervous Nuclear Posture Review', Survival, vol. 60, no. 2, April–May 2018; Lukasz Kulesa, 'The 2018 US Nuclear Posture Review: A Headache for Europe', European Leadership Network, 6 February 2018; Oliver Meier, 'The U.S. Nuclear Posture Review and the future of nuclear order', European Leadership Network, 2 March 2018, <https://www.europeanleadershipnetwork.org/commentary/the-u-s-nuclear-posture-review-and-the-future-of-nuclear-order/>; Adam Mount, 'Trump's Troubling Nuclear Plan', Foreign Affairs, 2 February 2018; Anna Péczeli, 'Invited Expert Commentary on the Nuclear Posture Review', Bulletin of the Atomic Scientists, 20 February 2018, <https://thebulletin.org/experts-new-nuclear-posture-review11480>.
- 31 Gen. John Hyten, Nuclear Posture Review Discussion at National Defense University.

32 'Evidence of Russian Development of New Subkiloton Nuclear Warheads [Redacted]', Intelligence Memorandum, Central Intelligence Agency, 30 August 2000, approved for release October 2005, https://www.cia.gov/library/readingroom/docs/DOC_0001260463.pdf.

33 For response to criticism about destabilizing character of a low-yield SLBM, see: Frank Miller, 'Addressing Fears About the Nuclear Posture Review and Limited Nuclear Use', *War on the Rocks*, 28 February 2018, <https://warontherocks.com/2018/02/addressing-fears-nuclear-posture-review-limited-nuclear-use/>; Austin Long, 'Discrimination Details Matter: Clarifying an Argument About Low-Yield Nuclear Warheads', *War on the Rocks*, 16 February 2018, <https://warontherocks.com/2018/02/discrimination-details-matter-clarifying-argument-low-yield-nuclear-warheads/>

34 James N. Miller, Jr. and Richard Fontaine, 'Navigating Dangerous Pathways. A Pragmatic Approach to U.S.-Russian Relations and Strategic Stability', *Center for a New American Security*, January 2018, pp. 8, 21, <https://s3.amazonaws.com/files.cnas.org/documents/CNASReport-ProjectPathways-Final3-web.pdf?mtime=20180124162918>; Aaron Mehta, 'DoD's cost of low-yield nuclear warhead for submarines set at \$48.5 million', *Defense News*, 19 March 2018, <https://www.defensenews.com/smr/nuclear-triad/2018/03/19/dods-cost-of-low-yield-nuclear-warhead-for-submarines-set-at-485-million/>.

35 Ministry of Foreign Affairs of Japan, 'The Release of the U.S. Nuclear Posture Review (NPR) (Statement by Foreign Minister Taro Kono)', 3 February 2018, http://www.mofa.go.jp/press/release/press4e_001893.html.

36 NPR, p. 38.

37 *Ibid.*, p. 36.

38 *Ibid.*

39 *Ibid.*, p. 48.

40 See more: The North Atlantic Treaty Organisation. Facts and Figures. NATO Information Service, Brussels 1981, p. 138, <http://archives.nato.int/north-atlantic-treaty-organisation-facts-and-figures/>; "Consultation is Presidential Business" Secret Understandings on the Use of Nuclear Weapons, 1950-1974, National Security Archive Electronic Briefing Book No. 159, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB159/>.

41 Christopher Woody, 'Germany's fighter jets may not be fit for NATO service — and it's the latest setback in a wider problem', *Business Insider*, 3 April 2018, <http://www.businessinsider.com/germany-military-lack-of-readiness-nato-operations-2018-4>.

42 Robert G. Bell, 'Maintaining nuclear deterrence in Europe: An American perspective,' Speech delivered at the Finnish Institute of International Affairs, 2 May 2018, <https://www.fiia.fi/tapahtuma/new-nuclear-challenges-in-europe-and-beyond>.

43 NPR, p. 2, 16.

44 *Ibid.*, p. 16-18.

45 NATO, 'Active Engagement, Modern Defence. Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization. Adopted by Heads of State and Government at the NATO Summit in Lisbon 19-20 November 2010', p. 5.

46 Article VI commits states-parties to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

47 'Warsaw Summit Communiqué, par. 64.

48 SASC-SF Hearing on the President's Fiscal Year 2019 Budget request for Strategic Nuclear Forces. Dr. Robert Soofer, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense, 11 April, 2018, p. 7.

49 NPR, p. XVII.

50 'Warsaw Summit Communiqué, par. 65.

51 *Ibid.*, p. 10; U.S. Department of State, 'Trump Administration INF Treaty Integrated Strategy', 8 December 2017, <https://www.state.gov/r/pa/prs/ps/2017/12/276363.htm>

52 NPR, p. 74.

53 *Ibid.*, p. 10.

54 Federal Foreign Office, 'Foreign Minister Sigmar Gabriel on the publication of the US nuclear posture review', 4 February 2018, <https://www.auswaertiges-amt.de/en/Newsroom/bm-veroeffentlichung-us-nuklearstrategie/1433732>.

- 55 NPR, p. 55.
- 56 Ibid.
- 57 'Foreign Minister Sigmar Gabriel on the publication of the US nuclear posture review'.
- 58 NPR, p. 74.
- 59 Federal Foreign Office, 'Federal Foreign Office on the New START Treaty for the reduction of strategic weapons and launchers by the US and Russia', 6 February 2018, <https://www.auswaertiges-amt.de/en/Newsroom/-/1496424>.
- 60 Robert G. Bell, op. cit.
- 61 NATO, 'Statement by the North Atlantic Council on the Intermediate-Range Nuclear Forces (INF) Treaty', 15 December 2017, https://www.nato.int/cps/en/natohq/news_150016.htm.
- 62 DDP, par. 25-27.
- 63 See: Heather Williams, 'Strategic Stability, Uncertainty and the Future of Arms Control', *Survival*, vol. 60, no. 2, April-May 2018, pp. 52-53.
- 64 Robert G. Bell, op. cit.
- 65 Matthias Gebauer, Christoph Schult and Klaus Wiegrefe, 'U.S. Demands NATO Action on Russian Missiles', *Spiegel Online*, 8 December 2017, <http://www.spiegel.de/international/world/us-delivers-ultimatum-to-nato-regarding-russian-missiles-a-1182426.html>
- 66 Eric Sayers, 'The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance', *War on the Rocks*, 13 February 2018, <https://warontherocks.com/2018/02/asia-inf/>; Paul McLeary, 'PACOM Harris: U.S. Needs to Develop Hypersonic Weapons, Criticizes 'Self-Limiting' Missile Treaties', *USNI News*, 14 February 2018, <https://news.usni.org/2018/02/14/pacom-harris-u-s-needs-develop-hypersonic-weapons-criticizes-self-limiting-missile-treaties>.
- 67 'Warsaw Summit Communiqué', par. 54.
- 68 Ibid.
- 69 NPR, p. 21.
- 70 DDP, par.10.
- 71 NPR, p. 21.
- 72 Frank A. Rose, 'Is the 2018 Nuclear Posture Review as Bad as the Critics Claim it is?', *Policy Brief*, Brookings Institution, April 2018, p. 5, https://www.brookings.edu/wp-content/uploads/2018/04/fp_20180413_2018_nuclear_posture_review.pdf.
- 73 Tiphaine de Champchesnel, 'The United States, France and nuclear deterrence post NPR', *European Leadership Network*, 19 March 2018, <https://www.europeanleadershipnetwork.org/commentary/the-united-states-france-and-nuclear-deterrence-post-npr/>.
- 74 Stanley R. Sloan, 'Don't Expect a New NATO Strategic Concept Any Time Soon', *Atlantic Council*, 24 February 2017, <http://www.atlanticcouncil.org/blogs/new-atlanticist/don-t-expect-a-new-nato-strategic-concept-any-time-soon>; Patrick Keller, 'A New Strategic Concept for NATO?', *American Enterprise Institute*, September 2017, <http://www.aei.org/wp-content/uploads/2017/09/A-New-Strategic-Concept-for-NATO.pdf>.

This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or Lawrence Livermore National Security, LLC. LLNL-TR-752450

